

Notice of Allowability

Application No.

10/755,144

Examiner

Michael Y. Won

Applicant(s)

HATIME, HICHAM

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed January 8, 2004 and interview conducted on August 9, 2007.
2. ☒ The allowed claim(s) is/are 1, 4, 5, 22, 25, and 26 (renumbered 1-6).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

/Michael Won/
Primary Examiner

DETAILED ACTION

1. This action is in response to the amendment filed January 8, 2004.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Lloyd Sadler (Reg. No. 40,154) on August 9, 2007.
4. The application has been amended as follows:
Claims **2, 3, 6-21, 23, 24, 27 and 28** (originally-filed) have been canceled.

1. (Currently Amended) A method of reducing network congestion comprising the steps of:

transmitting multiple packets from a sending node to a receiving node over a network communication medium at a rate no faster than a predetermined maximum packet transmission rate value;

receiving multiple acknowledgements at the sending node from the receiving node;

measuring a transmission performance value based on transmission of a packet of said multiple packets and a corresponding acknowledgment of the multiple acknowledgements;

predicting an available bandwidth value based on at least two transmission performance values, wherein the step of predicting comprises:

determining a polynomial equation based upon the at least two transmission performance values wherein the step of determining comprises determining a cubic spline function based upon the at least two transmission performance values; and

extrapolating from the polynomial equation to determine the predicted available bandwidth value; and

adjusting the predetermined maximum packet transmission rate based on the predicted available bandwidth to reduce network congestion on the network communication medium.

22. (Currently Amended) A computer readable storage medium tangibly embodying program instructions to perform a method of reducing network congestion, the method comprising the steps of:

transmitting multiple packets from a sending node to a receiving node over a network communication medium at a rate no faster than a predetermined maximum packet transmission rate value;

receiving multiple acknowledgements at the sending node from the receiving node;

measuring a transmission performance value based on transmission of a packet of said multiple packets and a corresponding acknowledgment of the multiple acknowledgements;

predicting an available bandwidth value based on at least two transmission performance values, wherein the step of predicting comprises:

determining a polynomial equation based upon the at least two transmission performance values wherein the step of determining comprises determining a cubic spline function based upon the at least two transmission performance values; and

extrapolating from the polynomial equation to determine the predicted available bandwidth value; and

adjusting the predetermined maximum packet transmission rate based on the predicted available bandwidth to reduce network congestion on the network communication medium.

Allowable Subject Matter

5. Claims 1, 4, 5, 22, 25, and 26 are allowable over prior art of record in light of the Examiner's Amendment above.

6. The following is an examiner's statement of reasons for allowance:

The prior art of record does not disclose, teach, or suggest neither singly nor in combination the claimed limitation of "predicting an available bandwidth value based on at least two transmission performance values, wherein the step of predicting comprises: determining a polynomial equation based upon the at least two transmission performance values wherein the step of determining comprises determining a cubic spline function based upon the at least two transmission performance values; and extrapolating from the polynomial equation to determine the predicted available bandwidth value" as recited in independent claims 1 and 22.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y. Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Won/

Primary Examiner

August 9, 2007